

## NOTES AND NEWS.

THE SYNONYMY of certain *Yuccas* is presented by Dr. C. S. Sargent in *Garden and Forest* (March 11th), which involves giving a new name, *Y. mohavensis*, to the *Y. baccata* Engelm., not Torrey.

PARTS 131-133 of *Die natürlichen Pflanzenfamilien*, just issued, are entirely the work of Dr. Engler himself, presenting *Rutaceæ*, with 111 genera, *Simarubaceæ*, with 28 genera, and the beginning of *Burseraceæ*.

THE FOLLOWING North American plants have been figured recently in *Garden and Forest*: *Nolina recurvata* (March 4th), *Lippia iodantha* (March 11th), *Nymphaea tetragona* (April 1st), *Oreodoxa regia* (April 15th).

IN THE MARCH number of *Bulletin de l'Herbier Boissier* Tonduz continues his interesting account of the flora of Costa Rica; and Freyn publishes another fascicle of new or noteworthy oriental plants, chiefly *Liliaceæ*.

A NEW East Indian species of *Phytophthora*, (*P. Nicotianæ*) which produces a serious disease of tobacco is described and figured by Dr. J. v. Breda de Haan in "Mededeelingen uit 's lands Plantentuin," XV (Batavia, 1896). The species seems allied to *P. Cactorum* if one may judge from the plate, but the spores are smaller, measuring about  $36 \times 25 \mu$ . Both conidia and oospores are described.

MR. A. K. MLODZIANSKY publishes in *Garden and Forest* (March 4th) some interesting results of observations on the rate of growth of "loblolly pine." The height growth reaches its usual limit (95<sup>ft</sup>) in 90 years; the second decade showing the most rapid rate. The diameter growth shows the most rapid rate during the first decade; while the mass accretion increases continuously in rate until between 100 and 110 years, at which time this pine reaches its maximum growth.

MR. GEORGE MASSEE has published (*Jour. Bot.* April), with plate, descriptions of certain new or critical fungi. *Clypeum* (*Hysteriaceæ*) is proposed as a new genus from New Zealand. Several of the new species are from the United States, and the generic name *Spragueola* is proposed for a New England fungus communicated by Isaac Sprague to Berkeley and referred by him to *Mitrula*, regarding it the same as *Spathularia crispata* Fr. It now stands as *S. Americana*.

MICHIGAN AGRICULTURAL COLLEGE observed Friday, May 1st, as Arbor Day, by public exercises, which included addresses by President J. L. Snyder and His Excellency John T. Rich, Governor of Michigan; also by Dr. R. C. Kedzie, who spoke on "The early forests of Michigan," by Mr. A. A. Crozier, on "Michigan forests of to-day," and by Dr. W. J. Beal, on "What now should be done with our forests?" The exercises were interspersed with appropriate music.

MR. F. H. KNOWLTON announces in *Science* (April 17th) the discovery of an American amber-producing tree. The material described

was obtained from Cape Sable, Maryland, but was in such an imperfect state of preservation that nothing very satisfactory could be ascertained as to its relationships. Mr. Knowlton provisionally refers it to *Cupressinoxylon*, dedicating the species (*Bibbinsi*) to Mr. Arthur Bibbins who explored the locality. The association of amber with the tree seems undoubted.

N. ALBOFF, in *Bull. Herb. Boiss.* (Feb.), has given an account of the forests of Western Transcaucasus. His conclusions, in brief summary, are: 1. The forest flora of Western Transcaucasus, although evidently allied to that of the Mediterranean, yet differs from it considerably. For this reason it should be regarded as a special modification of the latter. 2. It does not vary equally throughout the whole extent; at the south passing imperceptibly into the typical Mediterranean flora through a transition province (Turkish Lazistan); at the north passing more or less abruptly into the flora of southern Crimea.

THE COLUMBINE ASSOCIATION has been organized with the purpose of securing the official adoption of the columbine as the national flower. Mr. Frederick Le Roy Sargent, of Cambridge, Mass., is president. He has prepared a neat illustrated booklet setting forth the claims of the columbine to official recognition as the national flower, which are many and strong. Among the council we observe the names of a number of well-known educators, artists and architects, who warmly endorse these claims. Copies of the leaflet may be had for three cents by addressing the secretary, Mr. J. S. Pray, box 2774, Boston.

MISS SUSAN G. STOKES, of Stanford University, California, has collected a large number of seed plants upon a trip through the mountains back of San Diego, which she offers for sale in sets of 325. The route followed was from San Diego sixty miles due east along the boundary of Lower California; seventy-five miles north through the mountains, crossing an arm of the desert at Warner's Hot Springs and San Felipe; from Smith Mt. to Soledad, where are the few remaining trees of *Pinus Torreyana* Parry. A great many of the species obtained are limited in distribution and not a few are from type localities.

IN HIS "Studies upon the Cyperaceæ," begun in the *American Journal of Science* for May, Mr. Theo. Holm calls attention to the monopodial branching of certain of our species of *Carex*, notably the species of LAXIFLORÆ. As American students of Cyperaceæ seem to have disregarded this character it is perhaps as well to state the simple way by which sympodial and monopodial branching may be recognized in *Carex*: "The sympodial shows us a central flower-bearing stem, the base of which is surrounded by more or less faded leaves from the previous year; while the monopodial shows a central leafy shoot with a number of laterally developed flower-bearing stems."

THE NEXT MEETING of the American Association for the Advancement of Science, will be held in Buffalo, N. Y., commencing on Monday, August 24, 1896, and adjourning on Friday the 28th. Each section is invited this year to make out its special program, and in order

that these may be printed for distribution in advance, it is requested that titles and abstracts of papers to be presented in Section G (Botany) be transmitted to the Secretary of the Section, Prof. Geo. F. Atkinson, Cornell University, Ithaca, N. Y., not later than July 1, 1896. Those who intend reading papers will confer a great favor upon the Association by heeding this notice.

PROFESSOR E. L. GREENE'S *Pittonia* has again appeared (May 1st), the present number being Vol. iii, Part 13. It contains the "Nomenclature of the fullers' teasel," a curious and just now pertinent question; a new cruciferous genus, *Sibara*, to include certain Mexican and south Californian species heretofore variously referred to Cardamine, Arabis, Nasturtium, and Sisymbrium; more than thirty "New or noteworthy species;" a new genus of *Polemoniaceæ*, *Langloisia* by name, to include a small group of southern desert annuals variously referred to Gilia, Laeselia, and Navarretia; and four new Mexican species of Compositæ of the Eupatorium group, being from Pringle's distributions.

THE SECOND ANNUAL meeting of the Botanical Society of America will be held in Buffalo, New York, on Friday and Saturday, August 21 and 22, 1896. The council will meet at 1:30 P. M. on Friday, and the society will be called to order by the retiring president, Dr. William Trelease, Director of the Missouri Botanical Garden, at 3 P. M. The president-elect, Dr. Chas. E. Bessey, Professor of Botany in the University of Nebraska, will then take the chair. The afternoon session will be devoted to business. At the evening session the retiring president will deliver a public address on "Botanical Opportunity." The sessions for the reading of papers will be held on Saturday at 10 A. M. and 2 P. M.

IN *Bull. Herb. Boiss.* (Feb.) J. Briquet, the new Curator of the Deslesster Herbarium and Director of the Botanic Garden of Geneva, gives an account of the herbarium and garden. In the case of the former the exsiccati and their dates are listed. The garden is evidently making good use of its modest resources, in 1895 no fewer than 3,095 species being in cultivation. M. Briquet also contributes to the same number a biographical sketch, accompanied by portrait and bibliography, of his predecessor Jean Müller, known to systematists as "Muell. Arg." Müller's studies among phanerogams and lichens are well known. He was especially an authority upon that enormous and difficult family *Euphorbiaceæ*, which he contributed to De Candolle's *Prodromus*.

MESSRS. LONGMANS, GREEN & Co., have in the press "Diseases of Plants due to Cryptogamic Parasites," translated from the German of Dr. Carl Freiherr von Tubeuf, of the University of Munich, by William G. Smith, B. Sc., Ph. D., Lecturer on Plant Physiology to the University of Edinburgh. The original work appeared at the beginning of last year. It considers all investigations on the subject up to that time. In addition to a systematic treatment of the parasitic cryptogams, the first part of the book (100 pp.) is devoted to consideration of the general relationship of parasite to host, to methods of culture of fungi, and to a *résumé* of combative and preventive measures.

With the assistance of the author, the translator proposes to adapt the work for use in English-speaking countries, and to add the results of the more important recent investigations. New figures to supplement the original will be added, bringing the number to over 300.

AMONG THE biographical memoirs issued by the National Academy of Sciences that of Dr. Engelmann, by Charles A. White, has just appeared. The various memoirs of Dr. Engelmann already published had put on record his botanical work and many of the facts of his life. The present memoir, however, adds certain new biographical features in that the author had access to an autobiography written for the son, Dr. George J. Engelmann. The more one studies the life and work of Dr. Engelmann the more is he impressed by the unwearied patience, the prodigious capacity for work, and the keen and critical insight of the man. The debt which North American botany owes to him has not yet been fully appreciated.

IN THE *New England Magazine* for March there appears a very interesting paper, by Mr. James Ellis Humphrey, entitled "Botany and Botanists in New England." Prefacing his account with an entertaining description of Parkinson's *Theatrum Botanicum* and Josselyn's writings, the author begins with Manasseh Cutler as the first New England botanist. Cutler is certainly one of those botanists much of whose deserved reputation unfortunately died with him. His writings were voluminous, but chiefly remain as manuscript volumes, and they show a keenness of insight that was remarkable at the time and would have ranked him among the first of American botanists. Then follow accounts of Nuttall, Bigelow, Amos Eaton, Dewey, the brothers Boott, Hitchcock, Emerson, Oakes, Pickering, Gray, Wright, Watson, Robbins, Morong, Russell, Tuckerman, Frost, Olney, James, and D. C. Eaton, certainly a worthy list. The publication of numerous portraits also makes the paper especially interesting to botanists.

THE "MESCAL BUTTON" is yielding some very interesting results in the direction of its physiological action. It is the little cactus of the Lower Rio Grande region variously referred to *Mamillaria*, *Anhalonium*, and *Echinocactus*, and recently separated as a distinct genus under the name *Lophophora*. It has long been held as a sacred plant by the Indians of its region, and the "mescal ceremony" is one of the most interesting of savage rites. The *Therapeutic Gazette* for January contains an account of its therapeutic uses, by Dr. D. W. Prentiss and Dr. F. P. Morgan, and the ceremony connected with it, by Mr. James Mooney, of the U. S. Bureau of Ethnology. It seems to be a remarkable sedative, as well as a cerebral stimulant, without any of the unpleasant effects of the opium group. Its power in the production of visions of color is probably its most striking physiological effect. Mr. Mooney says: "So numerous and important are its medical applications, and so exhilarating and glorious its effect, according to the statements of the natives, that it is regarded as the vegetable incarnation of a deity, and the ceremonial eating of the plant has become the great religious rite of all the tribes of the southern plains." There may still be some question as to its identity, however, if it is, according to Mr. Mooney, "a small cactus, having the general size and shape of a rad-

ish, and covered on the exposed surface with the characteristic cactus prickles." While the size and form given apply to *Lophophora*, that genus is characterized by not possessing "the characteristic cactus prickles."

DR. GY. DE ISTVANFFI is preparing an elaborate work upon Clusius the founder of mycology. Charles de l'Escluse, or Carolus Clusius, began his collection of the plants of Hungary and adjacent regions in the latter half of the sixteenth century and in 1583 published a classical work under the title "*Rariorum aliquot stirpium per Pannoniam, Austriam, et vicinas quasdam provincias observatarum historia.*" A few years later he turned his attention to the larger fungi. Under the patronage of Baron Bathasar de Batthyány, Clusius undertook frequent excursions in Hungary. On the observations and notes made in these regions he based his treatise entitled "*Fungorum in Pannoniis observatorum brevis historia,*" published in 1601. For this work eighty-six water colored plates were prepared by a skilled artist under Clusius' direction which are now preserved as Codex no. 303 in the library of the University of Leyden. Dr. Istvánffi has carefully studied this Codex and has published some preliminary notes upon it. The new folio work will contain the text of the "*Fungorum historia;*" the eighty-six water colors in fac simile by chromolithography; a biographical sketch, illustrated by views, letters, autographs, etc.; together with the result of his extensive studies of this material from the mycological standpoint. It will be issued in ten fascicles each containing eight or nine colored plates, with the text in Hungarian and French. The price of each fascicle will be \$3.15, subscriptions being received for the complete work only. After publication the price will be \$45. Subscriptions may be sent to Dr. Gy de Istvánffi, chief of the department of botany of the National Hungarian Museum, Budapest V., Széchengi-uteza 1. II. 17.

From a recent circular of the Division of Forestry, U. S. Department of Agriculture, we take the following regarding our forest resources. After premising the want of exact forestry statistics, Mr. Fernow says:

The forest area of the United States (exclusive of Alaska) may be placed at somewhat less than 500,000,000 acres. This does not include much brush and waste land which is, and will remain for a long time, without any economic value. Seven-tenths of this area are found on the Atlantic side of the continent, one-tenth on the Pacific coast, another tenth in the Rocky mountains, and the balance is scattered over the interior of the western states. Both the New England states and the southern states have still fifty per cent. of their area, more or less, under forest cover, but in the former the merchantable timber has been largely removed. The prairie states, with an area in round numbers of 400,000 square miles, contain hardly four cent. of forest growth, and the 1,330,000 square miles—more than one-third of the whole country—of arid or semi-arid character in the interior contain practically no forest growth economically speaking.

The character of the forest growth varies in the different regions. On the Pacific coast, hardwoods are rare, the principal growth being coniferous and of extraordinary development. Besides gigantic red-

woods, the soft sugar pine and the hard bull pine, various spruces and firs, cedars, hemlocks, and larch form the valuable supplies. In the Rocky mountains no hard woods of commercial value occur, the growth being mainly of spruces, firs, and bull pine, with other pines and cedars of more or less value. The southern states contain in their more southern section large areas occupied almost exclusively by pine forests with the cypress in the bottom lands; the more northern portions are covered with hardwoods almost exclusively, and intervening is a region of mixed hardwood and coniferous growth; spruces, firs, and hemlocks are found in small quantities confined to the mountain regions. The northern states are mainly occupied by hardwood growths, with conifers intermixed, sometimes the latter becoming entirely dominant, as in the spruce forests of Maine, New Hampshire, or Adirondacks, and here and there in the pineries of Michigan, Wisconsin, and Minnesota, or in the hemlock regions of Pennsylvania and New York.

The amount of timber standing is, roughly, 2,300,000,000,000 ft., board measure, while the total annual cut is estimated at 40,000,000,000 ft., of which three fourths is pine and the rest hardwood. The total wood consumption is about 50 cu. ft. per acre, a figure nearly corresponding to the yield per acre realized in the well-kept forests of Prussia where reproduction is secured by skillful management. Forest products stand easily second in value to agricultural products, exceeding mineral products by more than 50 per cent. The annual loss by fire is estimated at \$25,000,000.